



The Role of Cognitive Emotion Regulation Strategies on Predicting Aggression and Competitive Anger Among Athletic Students

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Abstract

Background: The pressure of competitive sport in some situations can cause aggression and anger.

Objective: The purpose of this study was to determine the role of cognitive emotion regulation strategies on predicting aggression and competitive anger among athletic students.

Methods: In this study 137 athletic students were participating voluntary; they were doing different sports and were chosen randomly. In order to collecting data Cognitive Emotion Regulation Questioner and Competitive Aggressiveness and Anger Scale were used. The Pearson correlation test and multiple regression analysis were used to analysis data.

Results: The results showed that the components of self-blame, blaming others can positively predict aggression and anger. Positive re-focusing also negatively predicts aggression and anger. No significant relationship was found between other cognitive emotion regulation strategies and aggression and competitive anger.

Conclusion: Promoting and modifying cognitive emotion regulation strategies seems to be effective in reducing athletes' negative emotions such as competitive anger and aggression. Sport psychologists are advised to use cognitive emotion regulation interventions to reduce athletes' anger and aggression.

Introduction

Emotions in today's world go far beyond different dimensions of life and manifest positive or negative adaptations of individuals. Evidence suggests that emotion regulation is associated with success or failure in different areas of life (Scott et al., 2008; Jacob et al., 2007). On the other hand, the importance and role of exercise in improving life and mental health is increasing day by day (Sumerfeld et al., 2008).

Emotion regulation refers to the ability to recognize and express emotions, as well as to modulate the experience of emotion, which is one of the first stages of psychological development

that is applied to all aspects of life (Gross, 2001). The use of cognitive strategies is one of the most common strategies of emotion regulation. Cognitions or cognitive processes help individuals adjust their emotions and emotions and not be overwhelmed by the intensity of emotions (Hosni, 2011). Cognitive emotion regulation refers to the cognitive style of information management that triggers emotion recall (Ochsner & Gross, 2005). It involves cognitive styles that each person uses to increase, decrease, or maintain his or her emotion (Gross, 2001). Politri (2002) argues that emotion regulation is inherent in the human nature. Gross and Thompson (2007), Kring and Salton (2010)

have discussed the strategies that individuals use to regulate their emotions in many theoretical and applied studies that have been referred to as adaptive and incompatible strategies.

Among these nine strategies: self-blame, other-blame, focus on thought and catastrophizing, maladaptive cognitive emotion regulation and acceptance strategies, re-focusing on planning, positive re-focusing, positive re-evaluation and putting into perspective, consistent emotion regulation strategies. Cognitive emotion regulation strategies have significant effects on the emotions that one experiences. Facing a potentially stressful situation will cause one to react to those situations (Martin, 2005). Since athletes have to compete in stressful situations, stress, anger and aggression are common in such situations. On the other hand, in sports, people compete directly and indirectly. Direct competition often conflicts and acts as a conflict of conflict between individuals and rival groups of aggression (Leith 1989).

Anger and aggression due to overt manifestations and high incidence (Kassinove et al., 1997 Apr. 1983) and the clinical and scientific consequences have been taken into account by experts and researchers. Any intentional behavior towards an opponent, official, group, or spectator that is not considered official competition law and that encourages one to avoid such behavior is defined as aggression in sport (Maxwell, 2004). On the other hand, anger is defined as a kind of mental assessment that increases the risk of physical and mental health by increasing physiological arousal. Aggression occurs in a variety of forms, verbal and physical form of aggression represent the

instrumental or behavioral components, anger represents the emotional aspect and hostility represents the cognitive aspect of aggression (Bass & Perry, 1992).

A review of previous findings shows that violence has increased in recent decades and has shown significant empirical evidence of anger's destructive effects on human relationships (Wang et al., 2015; Benarous et al., 2015). Hanin et al (2005) found in a study that at any cost winning athletes had a prevalence and players use anger and a little respect for their opponent during the match and even coaches and sports leaders emphasize players not to care too much about their competitors. Studies have found that emotion regulation strategies are positively associated with negative emotions reduction and emotion management and subjective well-being (Diffendorf et al., 2008; Martini & Busseri, 2010) And less adaptive cognitive emotion regulation strategies, including self-blame, catastrophizing, and focus on thinking, have significant relationships with manifestations of negative emotions such as stress, anger, depression, and anxiety (Yousefi, 2007).

Some studies have also shown that the use of some cognitive emotion regulation strategies can be effective in reducing negative emotions, such as anger (Mauss et al., 2007), anxiety (Egloff et al., 2006), Depression (Garnefskyc and kraaji, 2006; Garnefsky et al., 2001; Garnefsky et al., 2003) and in addition to reducing negative emotions, it can also increase positive emotions (Folkman & Moskowitz, 2000; Shiota, 2006). In contrast, a number of studies have shown that the use of maladaptive cognitive emotion regulation

strategies is associated with mental health problems. The findings of the current research indicate a strong correlation between maladaptive strategies, self-blame, rumination, and catastrophizing they have negative emotions such as depression, anxiety, stress and anger (Garnefsky et al., 2004 Erol ongen, 2010 Zlomek and Hahn, 2010 Martin and Dahlen, 2005). Brackett et al. (2010) also note that a person who has difficulty regulating negative emotions is more vulnerable to environmental pressures; thus, adaptive emotion regulation is associated with positive self-esteem and social interactions and an increase in the abundance of positive emotional experience leads to effective meditation with stressful situations and even promotes appropriate behaviors and activities in response to social situations (Narimani et al., 2013) and it is a key and determining factor in psychological well-being and effective functioning (Gransfek and Krraji, 2006); However, no study has examined the relationship between these variables in sport competition situations. Given the high prevalence of aggressive behaviors and competitive anger in athletes, it is necessary to investigate further the identification of factors and variables involved in athlete violence. In the present study, we attempted to investigate the role of cognitive emotion regulation strategies in the determination of competitive aggression and anger in athletes. Accordingly, this study sought to answer the question that among the nine strategies of cognitive emotion regulation, which adaptive and incompatible strategies have more predictive power for competitive aggression and anger in athletes?

Method

Subjects

The study population was all athletes in Tehran. Samples were selected using available sampling method. Four groups of Handball, Futsal, Soccer and Volleyball and six individual Badminton, Wushu, Table Tennis, Judo, Track and Field and Swimming were selected and with the announcement of verbal consent, they participated in the research.

Apparatus and Task

Demographic Characteristics questionnaire: Demographic characteristics questionnaire including 4 open-ended questions (age, athletic history, education level and specific illness history) and 8 closed-ended questions (gender, type of individual or team sport, marital status, smoking history, superior hands and feet, number of sessions per week, average hours per day, and highest championship title).

Cognitive Emotion Regulation Strategies Questionnaire: This questionnaire was developed by Garnefsky and kraaji (2006) and has eighteen questions that include two general strategies: cognitive regulation of positive emotions and cognitive regulation of negative emotions. Questions are answered on a five-point scale, from "almost never" to "almost always". Cronbach's alpha coefficient for the subscales ranged from 0.73 to 0.80 and 5-month post-test reliability coefficients for subscales ranged from 0.41 to 0.59. The correlation coefficient of this questionnaire with Depression Scale was 0.38 and with Anxiety Scale was 0.33 (Karnefsig & Kraaij, 2006).

The Persian version of the Cognitive Emotion Regulation Questionnaire in Iranian Culture has been standardized by Hosni (2011). In this study, the validity of the scale based on internal consistency methods (with Cronbach's alpha range of 0.76 to 0.92) and retest (with correlation range of 0.51 to 0.77) and validity of the questionnaire through principal component analysis using rotation Varimax, correlation between subscales (with correlation range of 0.32 to 0.67) and optimal criterion validity have been reported. Also, Yousefi (2007) reported a Cronbach's alpha coefficient of 0.82.

Aggression and Competitive Anger Questionnaire: The Maxwell & Moores (2007) Aggression and Competitive Anger Questionnaire was used to measure aggression and competitive anger. Internal consistency of this tool was reported 0.87 and test reliability was 0.88. The Persian version was released by Fathi Rezai et al. (2015) and its validity and reliability were reported to be acceptable.

The scale has 12 five-item items rated on a five-point Likert scale from "never" (score 1) to "always" (score five) and includes two subscales of anger (from questions 1 to 6) and aggression (From question 7 to 12). This questionnaire does not have an inverse score, with a total score ranging from 12 to 60.

Procedure

The questionnaires were distributed to the multidisciplinary groups and completed by self-report method and provided explanations in case of ambiguity by the second author.

Data analysis

After completing and collecting the questionnaires, the data were analyzed using SPSS 19 software. Descriptive statistics such as mean calculation, standard deviation, table drawing, percentage calculation and statistical tests such as Pearson correlation coefficient and multivariate regression were used to analyze the collected data.

Results

In Table 1, the characteristics of the subjects are reported by age and sex. Table 2 also presents the results of the correlation analysis between the research variables separately. Then, in order to determine aggression prediction results based on cognitive emotion regulation strategies, regression analysis was performed with the log method and the results showed significant correlation and prediction of competitive anger over strategies (Table 3).

Multivariate predictor coefficients for aggression were then reported and reported in Table 4, as the results showed that the only predictor variable of self-blame had a significant effect on aggression prediction and other variables of cognitive emotion regulation strategies had no significant effect on aggression prediction. Also, in order to predict anger, regression analysis indicated a significant relationship between anger and cognitive emotion regulation strategies (Table 5).

The prediction coefficients also showed that the variables of self-blame, positive focus, and blaming others had a significant effect on predicting anger (Table 6).

Table 1. Characteristics of the subjects by age and sex.

Gender	Abundance	Percentage	Average age	SD	Min age	Max age
Boy	67	48.90	23.23	2.11	20	30
Girl	70	51.09	23.27	2.77	18	33
Total	137	100	23.37	2.53	18	33

Table 2. Correlation matrix between variables with mean and standard deviation.

N	Variables	X	SD	1	2	3	4	5	6	7	8	9	10	11
1	Self-blame	6.18	2.00	1	-0.15	0/09	0/07	-0.18	-0.07	0.01	0.44	-0.33	0.38	0.13
2	Acceptance	6.75	2.19	1	0.21	0.32	0.44	0.21	0.48	-0.34	0.24	0.12	0.25	
3	rumination	7.41	1.64		1	0.00	0.10	0.25	0.21	0.06	-0.04	-0.00	0.11	
4	Positive refocusing	5.16	2.13			1	0.31	0.37	0.50	-0.15	0.06	0.06	0.37	
5	Refocus on planning	7.47	2.01				1	0.45	0.33	-0.42	-0.01	0.04	0.09	
3	Positive reappraisal	7.21	1.99					1	0.04	-0.24	-0.14	-0.00	0.10	
7	Putting into perspective	6.29	2.02						1	-0.29	0.03	0.01	0.27	
8	Catastrophizing	5.35	1.98							1	0.22	0.00	-0.08	
9	Other-blame	4.27	1.66								1	-0.12	0.15	
10	aggression	17.3	5.26									1	0.45	
11	anger	17.5	5.07											1

Table 3. Logistic regression analysis for predicting aggression.

Model	Sum of Squares	Mean Squares	df	R	F	Sig
Regression	781.84	86.87	9	0.45	3.69	0.001
Residual	2990.02	23.54	127			

Table 4. Multivariate Predictive Coefficients for Aggression.

Model	B	Std. Error	Beta	t	Sig
Steady	10.94	3.37	-	3.24	0.002
Self-blame	1.24	0.26	0.47	4.71	0.001
Acceptance	0.44	0.25	0.18	1.74	0.083
rumination	-0.26	0.27	-0.08	-0.95	0.342
Positive refocusing	-0.14	0.24	-0.05	-0.59	0.554
Refocus on planning	0.08	0.26	0.03	0.30	0.761
Positive reappraisal	-0.07	0.26	-0.02	-0.28	0.775
Putting into perspective	0.07	0.27	0.02	0.27	0.764
Catastrophizing	-0.31	0.30	-0.11	-1.04	0.296
Other-blame	-0.10	0.30	-0.03	0.32	0.745

Table 5. Logistic regression analysis for predicting anger

Model	Sum of Squares	Mean Squares	df	R	F	Sig
Regression	792.41	88.04	9	0.47	4.13	0.001
Residual	2703.52	21.28	127			

Table 6. Multivariate predictor coefficients for anger.

Model	B	Std. Error	Beta	t	Sig
Steady	8.08	3.20	-	2.52	0.013
Self-blame	0.58	0.25	0.23	2.33	0.021
Acceptance	0.18	0.24	0.07	0.75	0.452
ruminat	0.34	0.26	0.11	1.29	0.197
Positive refocusing	0.73	0.22	0.30	3.20	0.002
Refocus on planning	-0.21	0.25	-0.08	-0.87	0.383
Positive reappraisal	-0.07	0.25	-0.03	-0.30	0.763
Putting into perspective	0.06	0.26	0.02	0.24	0.810
Catastrophizing	-0.52	0.28	-0.02	-1.82	0.071
Other-blame	0.66	0.29	0.22	2.27	0.025

Discussion and Conclusion

The purpose of this study was to predict aggressive aggression and competitive anger based on cognitive emotion regulation strategies in athletic students. Based on the findings of this study, the relationship between cognitive emotion regulation strategies with aggression and competitive anger was confirmed. Concurrent regression analysis showed that among the maladaptive strategies of cognitive self-regulation, aggression predicts aggression.

Also, anger prediction is also a positive adaptive strategy of positive focus, and maladaptive strategies of self-blame and blame are good predictors of these factors. Based on these findings, it can be concluded that the significant relationship between cognitive emotion regulation strategies with these variables confirms the effect of these strategies in high and challenging situations such as sports competitions. The findings are consistent with the findings of research by Garnefsky et al. (2004), Ongen (2010), Zlomke and Hahn (2010), and Martin & Dahlen (2005), which show that among maladaptive strategies, self-blame, Ruminat and catastrophe have a strong correlation with negative emotions such as

depression, anxiety, stress and anger. Lenin (2006) has also shown that better understanding, understanding, and management of emotion in highly emotionally intelligent individuals may prevent states of maladaptation, aggression, restlessness, and mood disorders. Shiota (2006) states that the use of some adaptive cognitive emotion regulation strategies in the face of stressful situations reduces negative emotions and can in many cases increase positive emotions.

The findings of this study indicate that competitive aggression and anger in athletes following stressful situations are influenced by the strategies that athletes use to regulate their emotions. Athletes who are accustomed to using adaptive reappraisal strategies are less successful in controlling aggression and competitive anger than athletes who are less likely to use them. Using these adaptive strategies may reduce the negative emotions and thereby improve cognitive and emotional functioning, leading one to confront the problem and control the anger and aggression.

Concerning the mechanisms underlying the effect of emotion regulation on aggression, it can be conceptualized that the ability to regulate emotions as an integral part of normal development

can promote effective interpersonal interaction, decision making, and adaptive behaviors. Alijanzadeh et al. (2015) suggest that having the ability to regulate emotions has a strong effect on individuals' self-regulation ability. Self-regulation refers to all the psychological processes that individuals must perform in order to function adaptively; therefore, emotion regulation through increased self-regulation influences anger control and aggression. Given the wide range of cognitive emotion regulation strategies a person possesses, it is important to identify strategies that are effective in controlling aggression and competitive anger. The findings of this study may have important practical implications for sports coaches and psychologists.

Designing intervention programs based on cognitive emotion regulation strategies can reduce aggression and anger during sports competitions and generally increase mental health. This study, because it is the first time in Iranian sport community, requires repeated replication in different samples and more experimental confirmations. Research findings should therefore be interpreted with caution. Similarly, the research sample (a group of volunteer athletes) and the type of research (solidarity) put forward limitations in the generalizations, interpretations, and etiological attributes of the variables to be considered.

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